October 22, 2017

BY ELECTRONIC MAIL

U.S. Bureau of Land Management
Moab Field Office
Attn: Doug Rowles
82 East Dogwood
Moab, Utah 84532
blm_ut_mb_comments@blm.gov

Re: March 2018 Canyon Country District Oil and Gas Lease Sale EA & DNA Comments

Dear Mr. Rowles,

WildEarth Guardians ("Guardians") submits the following comments on the Bureau of Land Management's ("BLM's") draft environmental assessment ("EA"), DOI-BLM-UT-Y010-2017-0240-EA,[1] and draft determination of NEPA adequacy ("DNA"), DOI-BLM-UT-Y010-2017-0285-DNA,[2] in support of its March 2018 competitive oil and gas lease sale for the Moab and Monticello Field Offices. The agency is proposing to offer for lease 43 parcels comprising 52,401 acres in Grand and San Juan Counties, Utah. The agency's EA discusses the impacts of leasing 29 parcels (40,866.64 acres) outside the Moab Master Leasing Plan ("MMLP") and the agency's DNA approves leasing 14 parcels within the Moab Master Leasing Plan[3] (10,534 acres).

WildEarth Guardians is a nonprofit environmental advocacy organization dedicated to protecting the wildlife, wild places, wild rivers, and health of the American West. On behalf of our members, Guardians has an interest in ensuring the BLM fully protects public lands and resources as it conveys the right for the oil and gas industry to develop publicly-owned minerals. More specifically, Guardians has an interest in ensuring the BLM meaningfully and genuinely takes into account the air, water, and climate implications of its oil and gas leasing decisions and objectively and robustly weighs the costs and benefits of authorizing the release of more

[1] The EA for the parcels outside the MMLP can be found at: https://eplanning.blm.gov/epl-front-office/projects/nepa/82261/120979/147735/FY18_CCDO_Leasing_EA.pdf.

[2] The DNA for the parcels within the MMLP can be found at: https://eplanning.blm.gov/epl-front-office/projects/nepa/88117/120908/147664/FY18_CCDO_Leasing_DNA.pdf.

[3] Two of the parcels discussed in the DNA are on the border between field offices. Thus, they are partially subject to the Moab Master Leasing Plan Area and partially subject to the Monticello Resource Management Plan.

pollutants known to cause health impacts and greenhouse gas emissions known to contribute to global warming.

As discussed below, WildEarth Guardians requests that the BLM refrain from offering all of the parcels up for lease until it completes its requirements under the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321–4370h.

I. Legal Background

Requirements of NEPA

NEPA is our "basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). The law requires federal agencies to fully consider the environmental implications of their actions, taking into account "high quality" information, "accurate scientific analysis," "expert agency comments," and "public scrutiny," prior to making decisions. *Id*. at 1500.1(b). This consideration is meant to "foster excellent action," resulting in decisions that are well informed and that "protect, restore, and enhance the environment." *Id*. at 1500.1(c).

To fulfill the goals of NEPA, federal agencies are required to analyze the "effects," or impacts, of their actions to the human environment prior to undertaking their actions. 40 C.F.R. § 1502.16(d). To this end, the agency must analyze the "direct," "indirect," and "cumulative" effects of its actions, and assess their significance. 40 C.F.R. §§ 1502.16(a), (b), and (d). Direct effects include all impacts that are "caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a). Indirect effects are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." *Id*. at § 1508.8(b). Cumulative effects include the impacts of all past, present, and reasonably foreseeable actions, regardless of what entity or entities undertake the actions. 40 C.F.R. § 1508.7.

An agency may prepare an environmental assessment ("EA") to analyze the effects of its actions and assess the significance of impacts. *See* 40 C.F.R. § 1508.9; *see also* 43 C.F.R. § 46.300. Where effects are significant, an agency must prepare an Environmental Impact Statement ("EIS"). *See* 40 C.F.R. § 1502.3. Where significant impacts are not significant, an agency may issue a Finding of No Significant Impact ("FONSI") and implement its action. *See* 40 C.F.R. § 1508.13; *see also* 43 C.F.R. § 46.325(2).

Within an EA or EIS, the scope of the analysis must include "[c]umulative actions" and "[s]imilar actions." 40 C.F.R. §§ 1508.25(a)(2) and (3). Cumulative actions include action that, "when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement." 40 C.F.R. § 1508.25(a)(2). Similar actions include actions that, "when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together." 40 C.F.R. § 1508.25(a)(3). Key indicators of similarities between actions include "common timing or geography." *Id*.

The BLM has developed a handbook to help the agency comply with NEPA. *See* BLM, NEPA Handbook, H-1790-1 (Jan. 2008), available at

https://www.blm.gov/sites/blm.gov/files/uploads/Media_Library_BLM_Policy_Handbook_h1790-1.pdf. In it, the BLM outlines when the agency can rely on a DNA. In general, the BLM must examine whether an existing NEPA document such as the EIS for an RMP "adequately cover[s] a proposed action." *Id.* at 23. The BLM does this by looking at four factors, including 1) whether the proposed action is "a feature of, or essentially similar to, an alternative analyzed in an existing NEPA document . . . [and] is the project within the same analysis area," 2) whether "the range of alternatives analyzed in the existing NEPA documents [are] appropriate with respect to the new proposed action, given current environmental concerns, interests, and resource values," 3) whether "the existing analysis is valid in light of any new information or circumstances (such as rangeland health standard assessments, recent endangered species listings . . .) [including whether] you can reasonably conclude that new information and new circumstances would not substantially change the analysis," and 4) whether "the direct, indirect, and cumulative effects that would result from the implementation of the new proposed action [are] similar . . . to those analyzed in the existing NEPA document." *Id.*

I. The BLM's EA, DNA, and the Moab Master Leasing Plan/FEIS Violate NEPA.

The BLM's analyses in support of the March 2018 lease sale fall short of complying with NEPA for six reasons. First, the BLM cannot defer its NEPA analyses to the APD stage because leasing confers a right to develop. Second, the BLM's Reasonably Foreseeable Development assumptions in the EA for the non-MMLP parcels are misleading and contrary to existing interest on the ground. Third, because the BLM approves the 14 parcels within the MMLPA through a DNA, the agency never considers a no leasing alternative or an alternative that addresses the climate impacts of leasing these parcels. Fourth, the BLM's EA and the DNA/MMLP fail to analyze the cumulative ozone emissions and greenhouse gas emissions that will result from the lease sale in combination with other federal lease sales occurring over a similar time period and geography. Fifth, the BLM's EA and DNA/MMLP fail to fully consider using the social cost of carbon protocol to analyze the costs and significance of carbon emissions. Finally, the BLM completely fails to even acknowledge the impacts of the lease sale on the newly created Bears Ears National Monument.

A. The BLM Cannot Defer its NEPA Analyses to the APD Stage.

To start, throughout the EA for the 29 parcels outside of the MMLP, the BLM repeatedly states that additional, site-specific analysis will be deferred until the Application Permit to Drill ("APD") stage. EA at 9 ("Should a lease be issued, site-specific analysis of individual wells and roads would occur when a lease holder submits an Application for Permit to Drill (APD)."), 23 ("Additional information about potential emissions would also be available and calculated as part of subsequent site-specific reviews at the APD stage."), 36 ("[A]n air emissions inventory may be required at the APD stage to mitigate oil and gas exploration and development activity impacts on air quality."), and 42 ("Further NEPA analysis would be conducted at the APD stage, when specific development details with which to analyze potential GHG emissions are likely to be known."); *see also* DNA at 2. But, presenting NEPA analysis in a piecemeal manner and at the last minute runs contrary to the requirements and spirit of NEPA.

"NEPA is not designed to postpone analysis of an environmental consequence to the last possible moment." *U.S. Bureau of Land Management v. Kern*, 284 F.3d 1062, 1072 (9th Cir. 2002); *see also* 40 C.F.R. § 1500.1(b) ("NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken."). This is especially the case if postponing analysis results in a piecemeal look at the impacts. *See* 40 C.F.R. § 1508. NEPA provides that the BLM must assess three types of actions: (1) connected actions, (2) cumulative actions, and (3) similar actions. 40 C.F.R. § 1508.25. Connected actions "are closely related and therefore should be discussed in the same impact statement." Actions are connected if they, among other things: [a]re interdependent parts of a larger action and depend on the larger action for their justification." *Id.* Because drilling cannot occur without the BLM first leasing the minerals, leasing and drilling are interdependent, connected actions.

Leasing also conveys a right to develop and is thus considered an irretrievable commitment of resources. NEPA requires that agencies prepare an EIS before there is "any irreversible and irretrievable commitment of resources." *See Conner v. Burford,* 848 F.2d 1441, 1452 (9th Cir. 1988). Indeed, BLM even admits that leasing confers an irretrievable right in the EA. The agency states that, "[o]nce the lease has been issued, the lessee has the right to use as much of the leased land as necessary to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands, subject to the standard lease terms and additional restrictions attached to the lease in the form of lease stipulations." EA at 5 (citing to 43 C.F.R. § 3101.1-2). This means that once BLM reaches the APD stage, the agency cannot include additional stipulations to limit drilling. Thus, further analysis at the APD stage would be too little, too late.

Finally, the need to do a full NEPA at the lease sale stage is supported by the fact that the BLM frequently does not complete a NEPA analysis at the APD stage. For example, the Moab and Monticello Field Offices have proposed approving 5 APDs through categorical exclusions, including:

- Approval of an additional oil well leg from an existing wellbore in Grand County in the Moab Field Office through categorical exclusion DOI-BLM-UT-Y010-2015-0009-CX;
- Approval of 1 well in Grand County in the Moab Field Office through categorical exclusion DOI-BLM-UT-Y010-2014-0211-CX;
- Approval of 1 well in San Juan County in the Moab Field Office through categorical exclusion DOI-BLM-UT-Y010-2014-0238-CX;
- Approval of 2 wells in Grand County in the Moab Field Office through categorical exclusion DOI-BLM-UT-Y010-2017-0319-CX; and
- Approval of 1 well in San Juan County in the Moab Field Office through categorical exclusion DOI-BLM-UT-Y010-2016-0053-CX.[4]

Although the BLM has not yet approved these requests, other field offices in Utah frequently use categorical exclusions, and the Moab and Monticello offices are likely to follow as industry

[4] The BLM's ePlanning website has information on all of the pending APDs.

interest in leasing and drilling increases. In sum, unless the BLM actually commits, through the imposition of a stipulation or stipulations, to conduct additional NEPA analysis at the drilling stage, it more often than not does not happen. This means that any commitment to address the impacts development of the proposed leases through subsequent NEPA is, at best, hollow, and at worst, a deliberate attempt to avoid accountability to addressing potentially significant environmental impacts under NEPA.

B. The BLM's Estimate of Reasonably Foreseeable Development for the Lease Sale Parcels is Inaccurate and Misleading.

The BLM must also analyze the reasonably foreseeable development of the lease parcels in context with current, on-the-ground information. *See High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp. 3d 1174 (D. Colo. 2014) ("The EA, while typically a more concise analysis than an EIS, must still evaluate the need for the proposal, alternatives as required by NEPA section 102(2)(E), and the environmental impacts of the proposed action and alternatives."). Here, the BLM predicts that 15 wells will result from 29 parcels. EA at 9. This means that 14 parcels will experience no development at all, assuming that development on the other parcels results in at least one well.[5] Unfortunately, this assumption runs contrary to the BLM's own data on development. For example, the BLM states in the EA that: "The RFD for the proposed action (Appendix E) estimates 16 oil and gas wells could be constructed and drilled in the next 10 years. [But,] [c]urrently, *the CCDO has 20 approved APDs that have not yet been drilled and 44 pending APDs that are currently being processed but have not yet been approved."* EA at 58 (emphasis added). This indicates that development in the area is more intense than anticipated by the RFD and is likely increasing. This conclusion is further supported by the large number of expressions of interest for the March 2018 lease sale. The purpose of site-specific analysis at the project level is to ensure that BLM is incorporating accurate, current data. The BLM must take this into account.

Moreover, BLM's estimate of reasonably foreseeable development is illogical because it fails to assess the leases in the context of existing development. Here, the BLM calculated an approximate number of wells by diving the percentage of lease sale acreage by the total acres available for lease in the Moab and Monticello Field Offices. *See* EA, App'x E. But, as the BLM is well aware, development does not occur uniformly across a landscape. A more logical approach would be one similar to that taken by the Vernal Field Office in Utah. For example, for the December 2017 sale, the Vernal FO presumed that, at a minimum, one well would be developed on every lease parcel offered for sale. *See* Vernal Field Office, *December 2017 Competitive Oil and Gas Lease Sale Final Environmental Assessment*, App'x D (Sept. 1, 2017), https://eplanning.blm.gov/epl-front-office/projects/nepa/80165/119135/145398/FEA.pdf. The Vernal FO also considered whether the parcel in question was within 2 miles of a well which had produced oil or gas within the past 6 years. *Id.* This approach addresses the fact that industry has nominated the lease parcels, and therefore, the likelihood of development is high. This approach also takes into account existing production and ensures that the agency's development

[5] The BLM actually assumes that some parcels will have .5 wells drilled on them but rounds up to whole number to come up with the estimate of 15. The BLM ends up at this number because "The RFD for the March 2018 lease sale is based on the proportion of the authorized lease acreage compared to the acreage contained in the nominated lease parcels within the CCDO exclusive of the Moab MLP area." EA at 9.

assumptions are current based on nearby wells. Neither of these assumptions are incorporated into the BLM's approach for this lease sale. Thus, the BLM's development assumptions are misleading and likely inaccurate.

C. The BLM's DNA Fails to Analyze a No Leasing Alternative or an Alternative that Addresses Climate Impacts.

NEPA requires that in considering reasonable alternatives, federal agencies must "[i]nclude the alternative of no action." 40 C.F.R. § 1502.14(d).

The BLM's DNA for the parcels within the Moab Master Leasing Plan relies on the MMLP, the 2008 Moab RMP, and the 2008 Monticello RMP to conclude that no significant impacts will result from the lease sale. But, by tiering to these broader documents, the BLM fails to consider a "no leasing alternative" for the 14 parcels. The BLM also fails to consider an alternative the addresses climate impacts. *See* Moab MLP Record of Decision at 4, available at https://eplanning.blm.gov/epl-front-office/projects/lup/68430/94904/114786/05_Moab_MLP_ROD_Approved_Resource_Management_Plan_Amendments_508.pdf (discussing alternatives); *see also*, Monticello RMP/FEIS, Ch. 2 at 2-1 to 2-2, available at: https://eplanning.blm.gov/epl-front-office/projects/lup/68097/85616/102811/Chapter_2.pdf (discussing alternatives). The BLM's failure to properly consider a no leasing alternative or an alternative that address climate impacts renders its DNA invalid.

D. The BLM's EA and DNA Fail to Analyze the Reasonably Foreseeable Air Emissions and Greenhouse Gas Emissions that Would Result from Issuing the Proposed Lease Parcels.

The BLM's analyses in the EA, the DNA, and MMLP also completely omit a qualitative analysis of the reasonably foreseeable air emissions and greenhouse gas emissions that would result from leasing the proposed parcels.

For example, it the air emission section, the BLM notes that because "[i]t is not possible to accurately estimate potential air quality impacts by computer modeling from the proposed action due to the variation in emission control technologies as well as construction, drilling, and production technologies applicable to oil versus gas production and utilized by various operators, so this discussion will remain qualitative." EA at 31–32. But, the BLM's conclusion that site-specific air emissions are not possible to calculate at the lease sale stage is belied by the fact that the BLM has calculated such emissions before.

In the Royal Gorge Field Office of Colorado, the BLM contracted with URS Group Inc. to prepare an analysis of air emissions from the development of seven oil and gas lease parcels. *See* Exhibit 1, URS Group Inc., "Draft Oil and Gas Air Emissions Inventory Report for Seven Lease Parcels in the BLM Royal Gorge Field Office," Prepared for BLM, Colorado State Office and Royal Gorge Field Office (July 2013). This report estimated emissions of ozone precursors and greenhouse gases on a per well basis. *See* Exhibit 1 at 3, 5. This report was later supplanted by the Colorado Air Resource Management Modeling Study, or CARMMS, which estimated

reasonably foreseeable emissions of greenhouse gases, criteria pollutants, and hazardous air pollutants associated with oil and gas development throughout Colorado, as well as part of New Mexico, and modeled air quality impacts. *See* Exhibit 2, ENVIRON, "Colorado Air Resource Management Modeling Study (CARMMS) 2021 Modeling Results for the High, Low and Medium Oil and Gas Development Scenarios," Prepared for BLM Colorado State Office (January 2015) (updated report available at https://www.blm.gov/sites/blm.gov/files/program_natural%20resources_soil%20air%20water_airco_quick%20link_CARMMS.pdf). As part of the CARMMS report, the BLM estimated annual per well emissions, including greenhouse gas emissions, as follows:

Phase	PM_{10}	$PM_{2.5}$	VOC	CO	NO_X	SO_2	CO_2	CH_4	N_2O	HAP
Conventional Construction	5.21	0.64	0.05	0.23	0.72	0.02	108.1	0.00	0.00	0.01
CBM Construction	3.37	0.44	0.03	0.12	0.36	0.01	56.58	4.06	0.00	0.00
Conventional Production	1.15	0.15	6.67	1.30	0.73	0.00	251.9	17.14	0.00	0.43
CBM Production	2.25	0.25	13.10	1.13	0.62	0.00	181.6	19.05	0.00	1.31

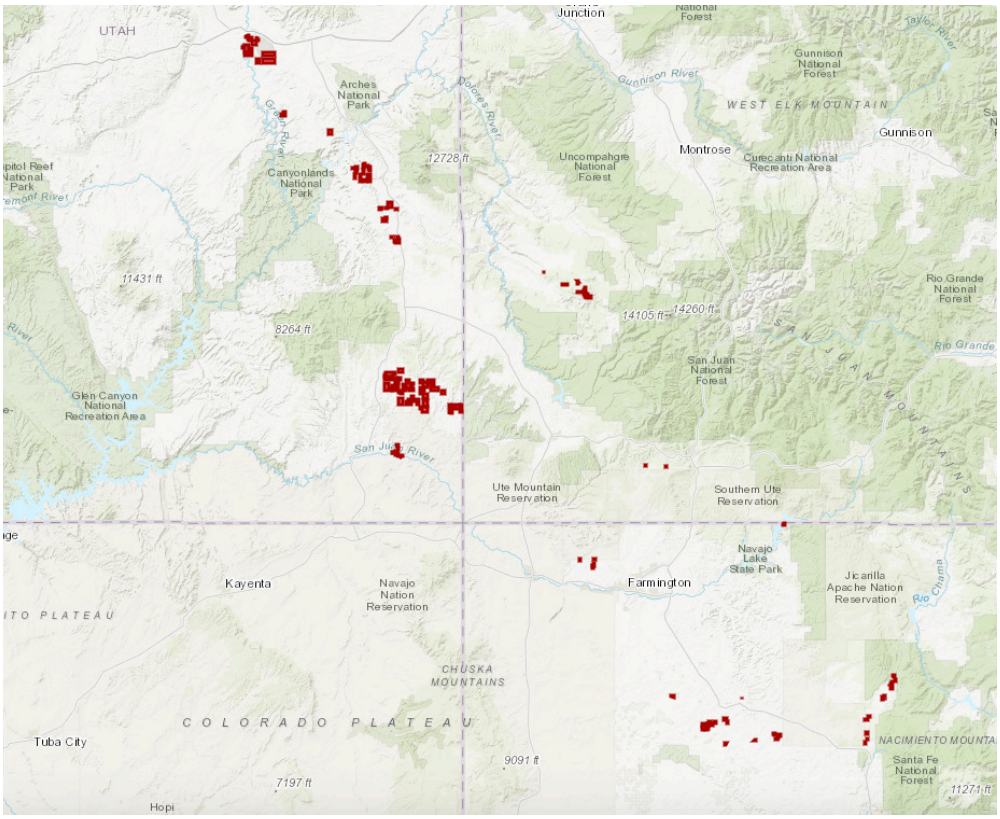
It is notable that, based on this estimate, total CO_2 emissions associated with construction and production of conventional (rather than "CBM" or coalbed methane) wells, could be as much as 360 tons per year. And, to top it off, this number would very likely increase for an unconventional oil or gas well, as shown by the Kleinfelder Report, which estimates emissions for representative oil and gas wells in the Uinta, Upper Green River, San Juan, Williston, and Denver Basins. *See* Exhibit 3, Kleinfelder, "Air Emissions Inventory Estimates for a Representative Oil and Gas Well in the Western United States," Report Prepared for Bureau of Land Management (March 25, 2013). Either way, the BLM has the capability to analyze these emissions and must do so.

On a similar note, the BLM cannot rely on the possibility that companies developing the lease parcels will apply for the Utah Department of Air Quality General Approval Order permit. First, as the BLM admits, applying for this permit is voluntary. *See* EA at 32 ("An oil and gas application *may apply for and, if qualified,* receive approval to operate under this GAO.") (emphasis added). Indeed, it is questionable whether the UDAQ is still accepting applications for the GAO. *See* General Approval Orders, Utah Dep't of Envtl. Quality, https://deq.utah.gov/Permits/GAOs/gaos.htm. Second, without a stipulation at the lease sale stage mandating that lessees use the air emissions controls described in the GAO, the BLM cannot assume that actual emissions will conform to these levels. *See* EA at 34-35. But, the BLM does just that. After describing GAO estimated emissions in Table 4-2, the BLM then uses the "controlled emissions" column to calculate the emissions inventory for the lease sale in Table 4-3. Because BLM relies on this untenable assumption to conclude that no significant impacts will result to air resources, the BLM's EA and FONSI are inaccurate and cannot support the approval of the proposed action.

Finally, the BLM's air emissions analysis is also inaccurate because the agency relies on two air emission modeling reports for different areas and different levels of development to summarily conclude that "the proposed action is not likely to violate, or otherwise contribute to any violation of the applicable air quality standards." EA at 35. But, the BLM cannot assume that these studies are representative of the emissions that will result here. The first report, the Cane Creek Modeling report, is not attached to the EA for examination, but based on the BLM's description of it, it focused on only NO_2 and PM_{10} emissions. *See* EA at 35. The second modeling analysis focuses on development within the MMLP area. But, development outside the MMLP may occur within a different formation or use entirely different extraction techniques. Either way, the BLM cannot assume that these studies are representative of the lease parcels.

E. The BLM Fails to Fully Analyze and Assess the Cumulative Impacts of Ozone Emissions and Greenhouse Gas Emissions that Would Result from Issuing the Proposed Lease Parcels.

The BLM also ignores the cumulative impacts from ozone and greenhouse gas emissions that will result from past and future lease sales in Utah and surrounding states. For example, the BLM completely forgoes a cumulative climate impacts analysis of greenhouse gas emissions. EA at 61. ("Since climate change and global warming are global phenomena, for purposes of this NEPA analysis, the analysis presented above about the direct and indirect effects of GHG emissions from the Proposed Action is also an analysis of the cumulative effects of the Proposed Action."). And, the BLM's air emissions analysis relies on reports from 2013 to conclude that the 2015 NAAQS standard for ozone will not be exceeded. The BLM's lack of due diligence is particularly alarming because, as shown by the map below, there are a larger number of leases parcels from the March 2018 sales in Utah, Colorado, and New Mexico in the same geographic area.



March 2018 Lease Parcels in Utah, Colorado, and New Mexico in the Four Corners Region.

Finally, to top it all off, the BLM admits that the Four Corners area is very close to exceeding the 2015 National Ambient Air Quality Standard for ozone. *See* EA at 59. This perfect storm of leases occurring in the same area is precisely why NEPA requires a cumulative impacts analysis. Even assuming that this particular lease sale does not exceed the 2015 NAAQS ozone standard, the sum total of the leases occurring in the Four Corners very likely will.

The scale of leasing from 2017 supports the conclusion that the BLM must complete a full cumulative impacts analysis. For example, in 2017, the BLM has leased or is planning to lease, the following:

- Utah: In March, 2017, the BLM sold 4 parcels covering 4,174.46 acres in the Canyon Country District of Utah. *See* https://www.blm.gov/sites/blm.gov/files/Programs_OilandGas_Leasing_RegionalLeaseSales_Utah_2017_SaleResults.pdf. And on June 15, 2017, the agency sold 8 parcels, totaling 7,479 acres in the Color Country District Office for sale. *See* https://www.blm.gov/sites/blm.gov/files/Programs_EnergyandMinerals_OilandGas_Leasing_RegionalLeaseSales_Utah_2017_SaleResults.pdf. In September, the BLM sold 9 parcels containing 4,101.7 acres for sale in the West Desert District. *See* https://www.blm.gov/sites/blm.gov/files/Programs_OilandGas_Leasing_RegionalLeaseSales_Utah_2017_SALERESULTS.pdf.

- Colorado: On March 9, 2017, the BLM sold 17 parcels covering 16,447.180 acres. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/70207/99188/120209/Sale_Results_March2017.pdf. On June 8, 2017, the BLM sold 70 parcels covering 63,268.120 acres in western Colorado. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/70241/109218/133789/Sale_Results_June2017.pdf. In September, the BLM sold 3 parcels totaling 403.808 acres. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/70242/119585/145943/Sept_2017_Sale_Results_LSS.pdf.

- Nevada: the BLM sold 20 parcels (35,502.86 acres) at its March sale and 3 parcels (5760 acres) at its June lease sale. The results for both sales are available at: https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/leasing/regional-lease-sales/nevada.

- New Mexico: The BLM held lease sales on January 25, 2017 where it sold 4 parcels (842.66 acres), https://eplanning.blm.gov/epl-front-office/projects/nepa/68428/96009/116065/Jan2017_SaleResults.pdf, and on June 8, 2017 where it sold 17 parcels (4,230.56 acres), https://eplanning.blm.gov/epl-front-office/projects/nepa/68426/109289/133858/June_8_2017_Sale_Results.pdf. The lease sale scheduled for September sold 61 parcels (15,331.91 acres). *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/69506/119984/146392/NM_090717_LeaseSaleResults.pdf. And, for the December sale, the BLM is slated to lease 7 parcels (2,104.15 acres). *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/80914/119523/145878/Final_Sale_Notice_12072017.pdf.

- Wyoming: In February of 2017, the BLM sold 278 parcels covering 183,155.020 acres in the High Plains and Wind River-Bighorn Basin District Offices. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/96936/117093/SALE_RESULTS_Feb_2017.pdf. In June, the sold 26 parcels covering 31,924.77 acres in the High Desert District Office. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/110941/135810/SALERESULTS.pdf. In September, BLM sold 127 parcels totaling 106,687 acres. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/121307/148154/SALE_RESULTS_3rd_Qtr_2017.v3.pdf. And this December, the agency is offering 45 parcels (72,843.75). *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/115163/140610/Sale_Notice.pdf.

- **All told, the BLM has leased or is proposing to lease approximately 696 parcels or 438,634.98 acres of publically-owned land in the states listed above in 2017.**

All of these lease sales are occurring in Utah and in states surrounding Utah over similar time period, and leasing in 2018 is sure to continue at a similar, if not increased pace, as shown by the March 2018 sales. Thus, the BLM's failure to discuss or acknowledge the lease sales is a

clear violation of NEPA's mandate to assess cumulative impacts, and the BLM's EA, DNA, and draft FONSI cannot stand as a result.

F. The BLM Fails to Analyze the Costs of Reasonably Foreseeable Carbon Emissions Using Well-Accepted, Valid, Credible, GAO-Endorsed, Interagency Methods for Assessing Carbon Costs.

It is also particularly disconcerting that the agency completely dismisses use of the social cost of carbon protocol, EA at 42, a valid, well-accepted, credible, and interagency endorsed method of calculating the costs of greenhouse gas emissions and understanding the potential significance of such emissions, while touting the economic benefits of oil and gas development. *See* EA at 31 (The "No Action Alternative" would diminish federal and state royalty income, and increase the potential for federal lands to be drained by wells on adjacent private or state lands."); *see also* BLM, *New Release: BLM Seeks Comments on Parcels offered in March Oil and Gas Lease Sale* (Sept. 22, 2017), https://eplanning.blm.gov/epl-front-office/projects/nepa/82261/121038/147794/News_Release_-_CCYD_Lease_Sale_Comment__Period.pdf, ("Oil and gas development on BLM-managed lands in Utah contributed $1.7 billion to the economy and supported 9,171 jobs in Fiscal Year 2016.").

The social cost of carbon protocol for assessing climate impacts is a method for "estimat[ing] the economic damages associated with a small increase in carbon dioxide (CO2) emissions, conventionally one metric ton, in a given year [and] represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO2 reduction)." Exhibit 4, U.S. Environmental Protection Agency ("EPA"), "Fact Sheet: Social Cost of Carbon" (Nov. 2013) at 1, formerly available online at https://www.epa.gov/climatechange/social-cost-carbon. The protocol was developed by a working group consisting of several federal agencies.

In 2009, an Interagency Working Group was formed to develop the protocol and issued final estimates of carbon costs in 2010. *See* Exhibit 5, Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (Feb. 2010), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf. These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies. *See* Exhibit 6, Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (May 2013), available online at https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/inforeg/technical-update-social-cost-of-carbon-for-regulator-impact-analysis.pdf. This report and the social cost of carbon estimates were again revised in 2015. *See* Exhibit 7, Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (July 2015). Again, this report and social cost of carbon estimates were revised in 2016. *See* Exhibit 8, Interagency Working Group on Social Cost of Greenhouse Gases, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866" (Aug. 2016), available online at

https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf.

Most recently, as an addendum to previous Technical Support Documents regarding the social cost of carbon, the Department of the Interior joined numerous other agencies in preparing estimates of the social cost of methane and other greenhouse gases. *See* Exhibit 9, Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, "Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide" (Aug. 2016).

Depending on the discount rate and the year during which the carbon emissions are produced, the Interagency Working Group estimates the cost of carbon emissions, and therefore the benefits of reducing carbon emissions, to range from $10 to $212 per metric ton of carbon dioxide. *See* Chart Below. In one of its more recent update to the Social Cost of Carbon Technical Support Document, the White House's central estimate was reported to be $36 per metric ton. Exhibit 8 at 4. In July 2014, the U.S. Government Accountability Office ("GAO") confirmed that the Interagency Working Group's estimates were based on sound procedures and methodology. *See* Exhibit 10, GAO, "Regulatory Impact Analysis, Development of Social Cost of Carbon Estimates," GAO-14-663 (July 2014), http://www.gao.gov/assets/670/665016.pdf.

Year	5% Average	**3% Average**	2.5% Average	High Impact (95th Pct at 3%)
2010	10	**31**	50	86
2015	11	**36**	56	105
2020	12	**42**	62	123
2025	14	**46**	68	138
2030	16	**50**	73	152
2035	18	**55**	78	168
2040	21	**60**	84	183
2045	23	**64**	89	197
2050	26	**69**	95	212

Most recent social cost of carbon estimates presented by Interagency Working Group on Social Cost of Carbon. The 95th percentile value is meant to represent "higher-than-expected" impacts from climate change. *See* Exhibit 8.

Although often utilized in the context of agency rulemakings, the protocol has been recommended for use and has been used in project-level decisions. For instance, the EPA recommended that an EIS prepared by the U.S. Department of State for the proposed Keystone XL oil pipeline include "an estimate of the 'social cost of carbon' associated with potential increases of GHG emissions." Exhibit 11, EPA, Comments on Supplemental Draft EIS for the Keystone XL Oil Pipeline (June 6, 2011).

More importantly, the BLM has also utilized the social cost of carbon protocol in the context of oil and gas approvals. In other recent Environmental Assessments for oil and gas leasing in Montana, the agency estimated "the annual SCC [social cost of carbon] associated

with potential development on lease sale parcels." Exhibit 12, BLM, "Environmental Assessment for October 21, 2014 Oil and Gas Lease Sale," DOI-BLM-MT-0010-2014-0011-EA (May 19, 2014) at 76, https://blm_prod.opengov.ibmcloud.com/sites/blm.gov/files/MT-DAKS%20Billings%20Oct%202014%20EA%20Protest.pdf. In conducting its analysis, the BLM used a "3 percent average discount rate and year 2020 values," presuming social costs of carbon to be $46 per metric ton. *Id*. Based on its estimate of greenhouse gas emissions, the agency estimated total carbon costs to be "$38,499 (in 2011 dollars)." *Id*. In Idaho, the BLM also utilized the social cost of carbon protocol to analyze and assess the costs of oil and gas leasing. Using a 3% average discount rate and year 2020 values, the agency estimated the cost of carbon to be $51 per ton of annual CO_2e increase. *See* Exhibit 13, BLM, "Little Willow Creek Protective Oil and Gas Leasing," EA No. DOI-BLM-ID-B010-2014-0036-EA (February 10, 2015) at 81, https://eplanning.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA_UPDATED_02272015.pdf. Based on this estimate, the agency estimated that the total carbon cost of developing 25 wells on five lease parcels to be $3,689,442 annually. *Id*. at 83.

To be certain, the social cost of carbon protocol presents a conservative estimate of economic damages associated with the environmental impacts climate change. As the EPA has noted, the protocol "does not currently include all important [climate change] damages." Exhibit 4 at 1. As explained:

> The models used to develop [social cost of carbon] estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research.

Id. In fact, more recent studies have reported significantly higher carbon costs. For instance, a report published this month found that current estimates for the social cost of carbon should be increased six times for a mid-range value of $220 per ton. *See* Exhibit 14, Moore, C.F. and B.D. Delvane, "Temperature impacts on economic growth warrant stringent mitigation policy," Nature Climate Change 2 (January 12, 2015). In spite of uncertainty and likely underestimation of carbon costs, nevertheless, "the SCC is a useful measure to assess the benefits of CO2 reductions," and thus a useful measure to assess the costs of CO2 increases. Exhibit 4.

That the economic impacts of climate change, as reflected by an assessment of social cost of carbon, should be a significant consideration in agency decisionmaking, is emphasized by a recent White House report, which warned that delaying carbon reductions would yield significant economic costs. *See* Exhibit 15, Executive Office of the President of the United States, "The Cost of Delaying Action to Stem Climate Change," (July 2014). As the report states:

> [D]elaying action to limit the effects of climate change is costly. Because CO_2 accumulates in the atmosphere, delaying action increases CO_2 concentrations. Thus, if a policy delay leads to higher ultimate CO_2 concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO_2 concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting

> CO_2 concentration to given level, then that delay means that the policy, when implemented, must be more stringent and thus more costly in subsequent years. In either case, delay is costly.

Id. at 1.

The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA and is specifically supported in federal case law. Courts have ordered agencies to assess the social cost of carbon pollution, even before a federal protocol for such analysis was adopted. In 2008, the U.S. Court of Appeals for the Ninth Circuit ordered the National Highway Traffic Safety Administration to include a monetized benefit for carbon emissions reductions in an Environmental Assessment prepared under NEPA. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1203 (9th Cir. 2008). The Highway Traffic Safety Administration had proposed a rule setting corporate average fuel economy standards for light trucks. A number of states and public interest groups challenged the rule for, among other things, failing to monetize the benefits that would accrue from a decision that led to lower carbon dioxide emissions. The Administration had monetized the employment and sales impacts of the proposed action. *Id*. at 1199. The agency argued, however, that valuing the costs of carbon emissions was too uncertain. *Id*. at 1200. The court found this argument to be arbitrary and capricious. *Id*. The court noted that while estimates of the value of carbon emissions reductions occupied a wide range of values, the correct value was certainly not zero. *Id.* It further noted that other benefits, while also uncertain, were monetized by the agency. *Id*. at 1202.

More recently, a federal court has done likewise for a federally approved coal lease. That court began its analysis by recognizing that a monetary cost-benefit analysis is not universally required by NEPA. *See High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp. 3d 1174 (D. Colo. 2014) (citing 40 C.F.R. § 1502.23). However, when an agency prepares a cost-benefit analysis, "it cannot be misleading." *Id*. at 1182 (citations omitted). In that case, the NEPA analysis included a quantification of benefits of the project, but, the quantification of the social cost of carbon, although included in earlier analyses, was omitted in the final NEPA analysis. *Id*. at 1196. The agencies then relied on the stated benefits of the project to justify project approval. This, the court explained, was arbitrary and capricious. *Id*. Such approval was based on a NEPA analysis with misleading economic assumptions, an approach long disallowed by courts throughout the country. *Id*. Furthermore, the court reasoned that even if the agency had provided reasons as to why the social cost of carbon was irrelevant, the agency must still provide "justifiable *reasons* for not using (or assigning minimal weight to) the social cost of carbon protocol . . . ." *Id.* at 1193 (emphasis added).

A recent op-ed in the New York Times from Michael Greenstone, the former chief economist for the President's Council of Economic Advisers, confirms that it is appropriate and acceptable to calculate the social cost of carbon when reviewing whether to approve fossil fuel extraction. *See* Exhibit 16, Greenstone, M., "There's a Formula for Deciding When to Extract Fossil Fuels," New York Times (Dec. 1, 2015), available at https://www.nytimes.com/2015/12/02/upshot/theres-a-formula-for-deciding-when-to-extract-fossil-fuels.html. Furthermore, the Proceedings of the National Academy of Sciences of the

United States of America ("PNAS"), acknowledged in a peer-reviewed article from February of this year that the social cost of carbon analysis is "[t]he most important single economic concept in the economics of climate change," and that "federal regulations with estimated benefits of over $1 trillion have used the SCC." Exhibit 17, William D. Nordhaus, Revisiting the Social Cost of Carbon, PNAS, Feb. 14, 2017, http://www.pnas.org/content/114/7/1518.full.pdf.

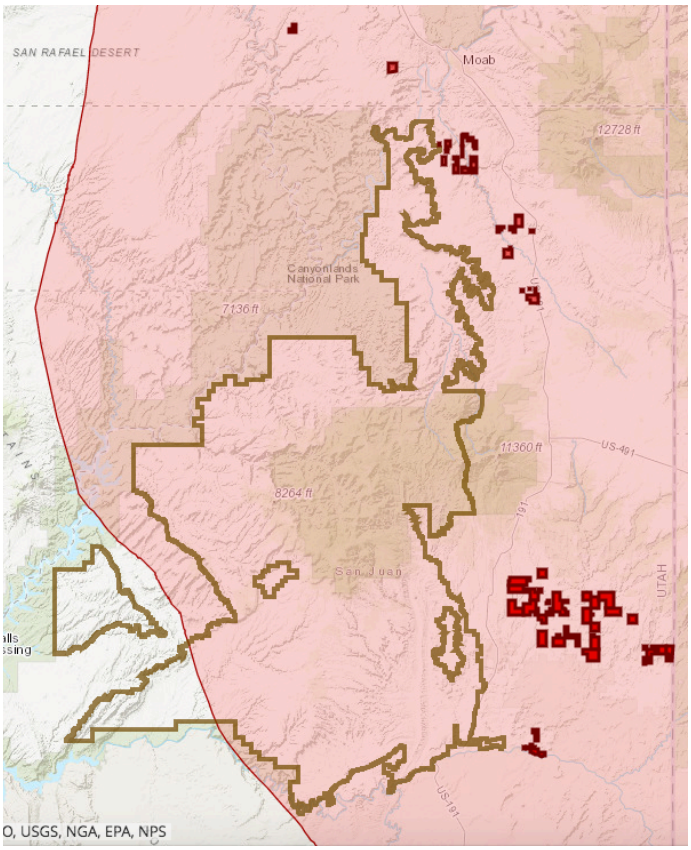
Clearly, the social cost of carbon provides a useful, valid, and meaningful tool for assessing the climate consequences of the proposed leasing, and the BLM's failure to fully explain its decision not to use this tool is wholly inappropriate under NEPA. While we do not suggest that a comprehensive cost-benefit analysis is required, the agency must assess the economic costs of the project if it addresses the economic benefits of the project.

G. The BLM Fails to Discuss the Impacts to Bears Ears National Monument from Leasing the Proposed Parcels.

Last but not least, neither the EA nor the DNA (and the overlying MMLP or RMPs) discuss the impacts that will result from leasing parcels directly next to the southeastern corner of Bears Ears National Monument. Indeed, none of the BLM's maps even outline the boundaries of the Monument. This is despite the fact that the BLM acknowledges that "comments expressed concerns including, but not limited to, the effect of oil and gas development to cultural resources, units of the National Park Service (Canyonlands and Arches National parks and Hovenweep National Monument), the Bears Ears National Monument, and climate change." EA at 9, 65.

Under NEPA, a federal agency must determine whether direct, indirect, or cumulative impacts are significant by accounting for both the "context" and "intensity" of those impacts. 40 C.F.R. § 1508.27. Context "means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality" and "varies with the setting of the proposed action." 40 C.F.R. § 1508.27(a). Intensity "refers to the severity of the impact" and is evaluated according to several additional elements, including, for example: unique characteristics of the geographic area such as proximity to historic or cultural resources; the degree to which the effects are likely to be highly controversial; the degree to which the possible effects are highly uncertain or involve unique or unknown risks; and whether the action has cumulatively significant impacts. *Id.* § 1508.27(b).

Here, the BLM must at a minimum acknowledge the existence of the Monument and assess impacts on the Monument. As shown by the map below, the majority of the proposed March 2018 leases are near the Monument, and some parcels are directly next to the northern border of the Monument. Should oil and gas development occur, it could impact the viewshed from the Monument, create haze and noise, and reduce dark night skies in the area. These impacts are likely significant based on the unique geography of the Monument, the historic and cultural significant of the Monument, and the controversial nature of siting oil and gas next to a Monument. By failing to even acknowledge the placement of the lease parcels next to the Monument, the BLM completely contravenes the requirements of NEPA to assess significance by weighing context and intensity.



II. Conclusion

In sum, the BLM's EA and DNA for the March 2018 oil and gas lease sale, and the underlying Moab Master Leasing Plan do not comply with NEPA by failing to properly assess reasonable development, failing to analyze a reasonable range of alternatives, and failing to assess the indirect and cumulative impacts from air and greenhouse gas emissions that will result from issuing the lease sale parcels. Furthermore, BLM fails to consider the use of the social cost of carbon protocol while simultaneously referring to the economic benefits of oil and gas development. As a result, WildEarth Guardians requests that agency remove all of the leases from the lease sale until it completes its duties under NEPA.

Sincerely,

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